

Step-by-Step Guidance

**GHG Emissions Reporting Using the
California ARB On-Line Reporting Tool**

**Petroleum Refineries, Hydrogen
Production Facilities, Oil and Gas
Production Facilities**

March 30, 2009

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■■■ Petroleum Refineries, Hydrogen Production Facilities, Oil and Gas Production Facilities ■■■

Step-by-Step Guidance for GHG Emissions Reporting Using the California ARB On-Line Reporting Tool

This guidance was prepared to provide operators of petroleum refineries, hydrogen plants, and oil and gas production facilities with step-by-step instructions for reporting their GHG emissions using the on-line reporting tool developed by the California Air Resources Board (ARB). Such facilities are required to report their GHG emissions if the facility emits 25,000 or more metric tonnes of CO₂ from stationary combustion annually.

This document focuses primarily on the mechanics of entering your emissions and other data into the on-line GHG reporting tool. For instructions on calculating facility emissions, explanation of the regulation and examples of how to compute emissions, see the [Instructional Guidance](http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm) for Operators available via the main [GHG Reporting](http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm) page (<http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm>). The [Instructional Guidance](http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm) includes detailed information about how to calculate GHG emissions for each facility type, as well as information for determining applicability. Chapters 1-6 describe the overall requirements of the regulation. Chapters 10 and 11 discuss reporting GHG emissions from Petroleum Refineries and Hydrogen Plants respectively, while oil and gas production is covered in Chapter 12. The Regulatory Activity link on the main GHG Reporting page includes the full text of the regulation.

Guidance documents are also available to help reporters understand and navigate the on-line reporting process. These documents may be accessed at the following links: [Reporting Tool Primer](http://www.arb.ca.gov/cc/reporting/ghg-rep/ghgtoolprimer.pdf) (<http://www.arb.ca.gov/cc/reporting/ghg-rep/ghgtoolprimer.pdf>). Because the design and approach used within the tool may be unfamiliar to some, the Primer will give a good orientation to the overall use of the tool, and may help simplify the reporting process. Also, the [Reporting Tool Users Guide](http://www.arb.ca.gov/cc/reporting/ghg-rep/ghgtoolusersguide.pdf) (<http://www.arb.ca.gov/cc/reporting/ghg-rep/ghgtoolusersguide.pdf>) will be an important aid for reporting.

Considerations for Oil and Gas Production Facilities and Hydrogen Production Plants

Hydrogen production facilities and oil-and-gas production facilities follow procedures that are similar, in their respective ways, to those discussed in this document for petroleum refineries.

Oil and Gas Production - Oil and gas production facilities report GHG emissions following procedures that depend on fuel type. As general stationary combustion sources they will benefit from a review of the [Step-by-Step Guide for GSCs](#). Unlike other general stationary combustion sources, however, default emission factors are generally not permitted. Measurements of fuel carbon content and/or heat value according to the frequencies and protocols specified by fuel type in the regulation will be used to develop estimates of annual emissions for direct input as “pre-calculated values” in the Reporting Tool (as described below for refineries).

Hydrogen Production Plants - Hydrogen production facilities, both merchant plants and those under operational control of a refinery, also follow procedures similar to refineries for data development and tool input. Hydrogen plants have unique opportunities to select in the Reporting Tool combined stationary combustion and process emissions, however. Options for reporting stationary combustion and process emissions are discussed in **Step Four** of this document, and reporting of hydrogen production and transferred CO₂ and CO is discussed in **Step Seven**.

STEP ONE Prepare for Reporting

Prior to reporting, it will be helpful to collect some overall information needed for reporting. You will be able to log in and return to the tool to complete reporting as needed, so all information does not need to be collected or entered all in one session. But the tool does not have an integrated tracking or “completion” wizard to monitor and track your progress in the reporting GHG emissions. Therefore, it will be important to track where you are in the reporting process to ensure that all required data are ultimately submitted. You will be prompted to provide several different types of information:

1. descriptive information about your facility,
2. personnel contact information,
3. annual emissions data, and
4. annual fuel and feedstock consumption data

In the case of complex reporting facilities such as petroleum refineries and hydrogen plants where thousands of individual data entries may be required to calculate facility GHG emissions we strongly advise that reporters calculate facility emissions off-line. It will be much easier to use the on-line reporting tool to enter the aggregated data rather than use the limited calculation capability available in the tool.

<p style="text-align: center;">STEP TWO Registering to Report</p>

Registering:

1. From the Reporting Tool website:
<http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm>, there are links to the reporting tool.
2. If you have not already done so, follow the steps in Section 2.1 of the [Reporting Tool Users Guide](#) to register your facility using the ARB ID and Access Code mailed to you by ARB. During registration you will input basic facility and contact information, and create a self-defined User ID and password for accessing the reporting system. If you believe you are subject to reporting and did not receive an initial ARB ID and Access code, it is your responsibility to contact ARB at ghgreport@arb.ca.gov to request access to the Reporting Tool.

Important Note: As the first person to register a facility in the Reporting Tool and upon completion of your account information, you become a Facility Manager. Upon completion of your reporting, only a Facility Manager may certify the data for submittal to ARB. The Reporting Tool allows up to two people to be designated as Facility Managers for a facility (or entity).

3. Click on the **Register** tab to register for the first time (subsequent to registering you will **Login** with the user name and password which you will create). The initial information you enter when registering should be that of a Facility Manager. The tool allows designation of two Facility Managers and an unlimited number of Facility Reporters. When you have entered all the required data click **NEXT**.
4. Read and **Accept** or **Decline** the Terms of Usage for the Reporting Tool.

STEP THREE Facility Information
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The Welcome Screen will be displayed after you accept the Usage Terms. As a Facility Manager you may:

1. Manage Facility Information
2. Report Annual Data
3. Certify Annual Data
4. View Reports

You will first set up your Facility Information.

1. Click on the **Manage Facility Information** link. A page entitled **Facilities** will be loaded. All the Facilities where you are the designated Facility Manager are displayed on this page.
2. Click on the **Facility Name** to access the Facility Information Page.
Note: Facility Information is displayed and data may be added and edited in cases where a data entry box is available.
3. The secondary sectors that you have designated for your Facility will be highlighted in blue. You may add or delete Facility secondary sectors as necessary.
4. Note that you may not change the ARB ID or Access Code. Edit and enter data fields where necessary.
5. If you wish to designate non-emissions data contained in your report as Confidential, check the box at the bottom of the screen to indicate so. The **Help** option at the top of the page provides more information on this option.
6. Click **SAVE**. **NOTE:** The tool does not prompt you to Save data as you move from one screen to the next. If you do not **SAVE** prior to moving from page to page the changes and data you just added must be re-entered.
7. Click the **Addresses** tab. This sheet will initially be populated with information from the ARB database used to contact reporters. Make changes as required, **SAVE** the data and click **BACK** to return to the Facility Information page. Any changes should be reflected in the Address field.

8. Next click the **Geographic Location** tab. The easiest way to determine the Latitude and Longitude of your facility may be to use the [Google™](#) Maps feature. Click on the [Google™](#) Maps box, use the zoom bar in the upper right corner of the display to zoom into your facility location, clicking and dragging the map to keep the facility location centered in the mapping field. In the case of larger facilities place the cursor as close as possible to the facility office or entry point. When you have located the cursor at the correct location for your facility, right click and choose the *get directions from here* option which appears in the pop-up box. A box will appear containing the latitude and longitude of the cursor. If this location appears correct, copy the latitude and longitude from [Google™](#) Maps to the Geographic Location page in the same format (decimal degrees). Close the [Google™](#) Maps application. If you choose to use a handheld or automotive GPS unit to determine your facility latitude and longitude, make sure the data is expressed in the NAD83 datum. Click **SAVE** when you have entered the required data on this page.
9. **Adding Contacts** - Next click the **Contacts** tab. This feature allows Facility Managers to establish contacts - those users who are permitted access to the on-line GHG data file for your facility. See *Figure 1-2 User Roles* in the Users Guide for more information concerning permitted roles and report access limitations for Facility Managers and Facility Reporters. Click **Create New Contact** to enter information for individuals that you wish to be associated with your facility reporting report. Enter information in the required date entry fields, click **SAVE** and then choose the appropriate role for the contact on the next page. The **Add/Change** tab allows you to choose a contact from individuals already registered with ARB. The **End Contact Relationship** allows Facility Managers to sever a relationship with an individual.
10. **Adding Facility Documents** - The regulation requires that a facility emissions data report include supplemental information about its parent company or related companies (see 95104(a)(8) of the [Regulation](#)). This information can be developed in a spreadsheet or other type of document and uploaded into the Reporting Tool. The Facility Documents tab described in Section 2.1.4.5 of the Users Guide provides instructions on how to add documents to the Reporting Tool. The Facility Document tab may be used to add any type of additional documents that the reporter thinks are appropriate. Please note that any information provided to ARB becomes part of the emissions data report and could be requested as part of the Public Records Act.

<p style="text-align: center;">STEP FOUR Add Emitting Activities and Devices</p>
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Prior to reporting fuel use and emissions, you must establish a database of all the Emitting Activities at your facility. Based on how the facility emissions are reported and the sector-specific requirements of the regulation, "Emitting Activities" could be either individual emission sources or aggregations of emission sources. You must also establish a database of devices (fuel meters) such that you can report device level fuel use at the last point of metering. The overall facility configuration is retained from year to year, and does not need to be input again unless there are modifications, additions, or deletions of emitting activities. In year one you will set up facility emitting activities for the sources that you are required to report. In subsequent years you will update the data associated with those sources, augmenting or modifying them as needed.

Adding Emitting Activities - This section of the guidance discusses the steps for adding emitting activities and setting up your account for reporting when first using the tool. Section 3 of the Users Guide illustrates in further detail the set-up of emitting activities.

Establishing the reporting framework for your facility emissions report requires an understanding of what the regulation requires -- see sections 95113 (refineries), 95114 (hydrogen plants), and 95115 (general stationary combustion facilities) and the related *Instructional Guidance* chapters as appropriate. In general you will want to set up an Emitting Activity for each of the emission sources that the regulation requires you to report; stationary combustion may be aggregated. For petroleum refineries there are seven **Emitting Activity Categories** (see below and Table 1) that may be reported.

1. Stationary Combustion
2. Stationary Combustion and Process
3. Process
4. Fugitive
5. Flares and Destruction Devices
6. Optional (Mobile, but not limited to Mobile)
7. Portable Equipment

Table 1. Reporting Tool Emitting Activity Categories

Emitting Activity Category	Comments	Activity Types
Stationary Combustion	Create an Emitting Activity page for Stationary Combustion . Choose Multiple Sources for the Activity Type . Use this Emitting Activity to report CO ₂ , CH ₄ and N ₂ O emissions for all fuels	Multiple Sources (list all fuels Combusted) Refinery Fuel Gas Natural Gas and Associated Gas Fuel Mixtures Other Fuels Low Btu Gases
Stationary Combustion and Process	Use for 1) Hydrogen Plant reporting combined Stationary Combustion and Process emissions, and 2) CEMS measuring both Stationary and Process emissions	Hydrogen Plant(s) Combined (Stationary and Process) Combined Stationary and Process (CEMS)
Process	Create an Emitting Activity page for each applicable pProcess eEmission category. Create a Hydrogen Plant Emitting Activity here if you plan to report Process and Stationary Combustion separately.	Asphalt Production Blowing Stills Catalytic Cracking (FCCU) Periodic Catalyst Regeneration Hydrogen Plant(s) Continuous Catalyst Regeneration (other than FCCU) Process Vents Sulfur Recovery Units
Fugitive	Create an Emitting Activity page for each applicable Fugitive Emission Source	Equipment Fugitive Emissions (use for SF ₆) use also for equipment fugitives Oil/Water Separators (general) Storage Tanks Wastewater Treatment (general)
Flares and Destruction	Create an Emitting Activity page for each applicable category	Flares Other Control Devices
Optional (Mobile, etc.)	Create an Emitting Activity page if you plan to voluntarily report facility related mobile emissions <i>OR</i> other emission sources not covered by the regulation (whether or not mobile).	Mobile (vehicle) emissions and other emission sources you wish to voluntarily report (e.g. coke calciner emissions)
Portable Equipment	Create an Emitting Activity page if you plan to voluntarily report portable equipment emissions	Generators Other Multiple Sources

Initially there will be no Emitting Activities listed for your facility. To start the process click the **Emitting Activities** tab. You will see the Add Emitting Activity page shown below in Figure 1.

Use this page to create an emitting activity. Enter the required fields below, and associate fuels specific to this emitting activity. To add fuels to your emitting activity, select one or more fuels from the Available Fuels list and use the arrow controls to move them to the Current Fuels list.

- 1.) Assigning unique Emitting Activity Names will assist you in tracking multiple separate activities for emissions estimation.
- 2.) The Emitting Activity Category and Type are used to categorize your emissions and fuels data.
- 3.) The Status field establishes whether this activity was operating at the facility during the year for which you are reporting emissions. If the activity was not operating for the report year, you do not need to report emissions for that year.
- 4.) Aggregation Level establishes how you would like the data you are reporting to be treated for facility emissions report purposes:
 - a.) Use "Summed" for all emitting activities that you would like added to other emitting activities to create a sum total for your facility.
 - b.) Use "Supplemental" for all emitting activities that you do not want added together into a total sum (e.g., specific equipment downstream of a meter already included in a summed total).
 - c.) Use "Optional" for emitting activities that you are not required to report (e.g., mobile emissions).
- 5.) Note that "Available Fuels" includes fuels, feedstocks and other inputs that should be available for the Activity Category and Type you have selected.

Facility

Facility Name	Old Sacramento Oil Refinery
ARB ID	401014

Add Emitting Activity

Emitting Activity Name *

Emitting Activity Category *

Activity Type *

Status *

Aggregation Level *

Available Fuels (Fuels, Feedstocks, or Other)

Current Fuels (Fuels, Feedstocks, or Other)

> < <<

Figure 1. Add Emitting Activity Screen

On the Add Emitting Activity page the following fields must be populated.

Table 2. Emitting Activity Data Fields

Data entry field	Comments
Emitting Activity Name	Enter a unique name here
Emitting Activity Category	Choose an Emitting Activity category (see Table 1) from the pull-down menu
Activity Type	Choose Multiple Sources
Status	Operating or Shutdown . Choose from pull-down menu - if Shutdown is chosen tool will not expect data entry for this Emitting Activity
Aggregation Level	Summed - choose for all Emitting Activities Supplemental - use where double counting is possible Optional - use for all Emitting Activities you are voluntarily reporting
Available Fuels (Fuels, Feedstocks, or Other)	Identify all fuels and feedstocks for which you must report usage data. Highlight left column selection, click > to move choice to right column

Stationary Combustion Emissions - Establish a Stationary Combustion field (Emitting Activity) to report CO₂, CH₄, and N₂O emissions. The reporting Refineries, Hydrogen Plants, Oil & Gas Production Facilities
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regulation requires reporting CO₂, CH₄, and N₂O emissions for five fuels or fuel categories (see below).

1. Refinery Fuel Gas
2. Natural Gas and Associated Gas
3. Fuel Mixtures
4. Other Fuels
5. Low Btu Gases

In addition to Stationary Combustion CO₂ emissions you are required to report Stationary Combustion CH₄ and N₂O emissions. After establishing a single Stationary Combustion Emitting Activity, and listing all the fuels combusted at your facility, the tool allows you to report CO₂, CH₄, and N₂O for each fuel you have listed. See Figure 2 below. Here we have named this Stationary Combustion Emitting Activity - All Refinery Stationary Combustion. Note that your facility may not combust all of the fuels listed.

Facility

Facility Name: Old Sacramento Oil Refinery
ARB ID: 401014

Edit Emitting Activity

Emitting Activity Name: All Refinery Stationary Combustion
Emitting Activity Category: Stationary Combustion
Activity Type: Multiple Sources
Status: Operating
Aggregation Level: Summed

Available Fuels (Fuels, Feedstocks, or Other)

- Asphalt & Road Oil, Fuel
- Asphalt, Fuel
- Aviation Gasoline, Fuel
- Biodiesel, Fuel
- Biogas, Fuel
- Biomass Derived Fuels (Solid), Fuel
- Coal (Anthracite), Fuel
- Coal (Bituminous), Fuel
- Coal (Lignite), Fuel
- Coal (Sub-bituminous), Fuel
- Coal (Unspecified (Electric Power)), Fuel
- Coal (Unspecified (Industrial Coking)), Fuel
- Coal (Unspecified (Other Industrial)), Fuel
- Coal (Unspecified (Residential/Commercial)), Fuel
- Coke, Fuel
- Crude Oil, Fuel
- Distillate Fuel Oil (#1, 2, 3, 4), Fuel

Current Fuels (Fuels, Feedstocks, or Other)

- Associated Gas, Fuel
- CA Low Sulfur Diesel, Fuel
- CA Reformulated gasoline, 5.7% ethanol, Fuel
- Flexigas, Fuel
- Low Btu Gas, Fuel
- Natural Gas (1000 to 1,025 Btu/Std cubic foot), Fuel
- Other, Fuel
- Refinery Gas, Fuel

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Figure 2. Establishing an Emitting Activity for Stationary Combustion

Stationary Combustion and Process Emissions - Use this Emitting Activity Category to set-up Emitting Activity pages for situations where you wish to report Stationary Combustion and Process emissions together as a single value (e.g., use of CEMS data). Note that **Emitting Activity - Hydrogen Plants** appears in both the **Stationary Combustion and Process** and **Process Emitting Activity Categories**. This is because the regulation provides reporters with the Refineries, Hydrogen Plants, Oil & Gas Production Facilities GHG Reporting Tool

option of reporting Hydrogen Plant Stationary Combustion and Process together or separately. If you plan to report Hydrogen Plant stationary combustion and process emissions separately, report plant stationary combustion emissions as part of the fuel specific stationary combustion emissions and establish a separate Emitting Activity for hydrogen plant process emissions. The reporting regulation allows the reporting of aggregate Stationary Combustion and Process Emissions in two situations - hydrogen plants and CEMS where the system measures combined combustion and process emissions. See Table 3 below.

Table 3. Emitting Activities - Stationary Combustion and Process Emissions

Tool Data Heading	Emitting Activities - Options for Combined Facility Stationary Combustion and Process Emissions	
Emitting Activity Name	Hydrogen Plant (additional info if required to differentiate multiple hydrogen plants)	CEMS (additional information if required to differentiate multiple CEMS)
Emitting Activity Category	Stationary Combustion and Process	Stationary Combustion and Process
Activity Type	Hydrogen Plant(s) Combined (Stationary and Process)	Combined Stationary and Process (CEMS)
Status	Operating (if operated during the report year)	Operating (if operated during the report year)
Aggregation Level	Usually Summed; Supplemental may be used to avoid double-counting	Usually Summed; Supplemental may be used to avoid double-counting
Current Fuels	Choose applicable fuels and feedstocks	Choose applicable fuels and feedstocks

Facility
Facility Name Old Sacramento Oil Refinery
ARB ID 401014

Edit Emitting Activity
Emitting Activity Name * Hydrogen Plant
Emitting Activity Category * Stationary Combustion and Process
Activity Type * Hydrogen Plant(s) Combined (Stationary and Process)
Status * Operating
Aggregation Level * Summed

Available Fuels (Fuels, Feedstocks, or Other)
 Asphalt & Road Oil, Fuel
 Asphalt, Fuel
 Associated Gas, Fuel
 Aviation Gasoline, Fuel
 Biodiesel, Fuel
 Biogas, Fuel
 Biomass Derived Fuels (Solid), Fuel
 CA Low Sulfur Diesel, Fuel
 CA Reformulated gasoline, 5.7% ethanol, Fuel
 Coal (Anthracite), Fuel
 Coal (Bituminous), Fuel
 Coal (Lignite), Fuel
 Coal (Sub-bituminous), Fuel
 Coal (Unspecified (Electric Power)), Fuel
 Coal (Unspecified (Industrial Coking)), Fuel
 Coal (Unspecified (Other Industrial)), Fuel
 Coal (Unspecified (Residential/Commercial)), Fuel

Current Fuels (Fuels, Feedstocks, or Other)
 Natural Gas (1025 to 1,050 Btu/Std cubic foot), Feedstock
 Natural Gas (1025 to 1,050 Btu/Std cubic foot), Fuel
 Pentane, Feedstock
 Refinery Gas, Fuel

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Figure 3. Establishing a Stationary Combustion and Process Emitting Activity

Process Emissions - This Emitting Activity Category is used to set up Emitting Activity pages for each of your facility's Process Emission sources. See Table 4 below, where the Emitting Activity categories available for reporting Process Emissions are listed. Notice that the category Hydrogen Plant(s) is one Activity Type that may be established here. Use this category to create an Emitting Activity page for each Hydrogen Plant where you plan to report Process Emissions separate from Stationary Combustion emissions.

Table 4. Emitting Activities - Process Emissions

Tool Data Heading	Emitting Activities - Facility Process Emissions						
Emitting Activity Name (enter unique process name)	Cat Cracking (FCCU)	Other Cat Regen - periodic	Hydrogen Plant(s)	Other Cat Regen - continuous	Process Vents	Asphalt blowing - un-controlled	Sulfur Recovery Units
Emitting Activity Category	Process	Process	Process	Process	Process	Process	Process
Activity Type	Catalytic Cracking	Periodic Catalyst	Hydrogen Plant(s) (if SC	Continuous Catalyst	Process Vents	Asphalt Production	Sulfur Recovery

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	(FCCU)	Regen	and Process reported separately)	Regen (other than FFCU)		Blowing Still	Units
Status	Operating	Operating	Operating	Operating	Operating	Operating	Operating
Aggregation Level	Summed	Summed	Summed	Summed	Summed	Summed	Summed
Current Fuels	FCCU Coke	Other input, Other	Enter feedstocks	Other, input, Other	Other input, Other	Asphalt Blown, other	Acid Gas, Other

Figure 4. Establishing a Process Emitting Activity

Fugitive Emissions - This Emitting Activity Category is used to set up Emitting Activity pages for each of your facility's Fugitive Emission sources. See Table 5 below where the Emitting Activity categories available for reporting Fugitive emissions are listed. Create an Emitting Activity for each Fugitive Emission that you are required to report at your facility. See the example in Figure 5.

Table 5. Emitting Activities - Fugitive Emissions

Tool Data Heading	Emitting Activities - Facility Fugitive Emissions			
Emitting Activity Name (enter unique	Wastewater Treatment	Oil/Water Separators	Storage Tanks	Equipment Fugitive

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emissions identifier)				Emissions
Emitting Activity Category	Fugitive	Fugitive	Fugitive	Fugitive
Activity Type	Wastewater Treatment Facilities (General)	Oil/Water Separators (General)	Storage Tanks	Equipment Fugitive Emissions (use for SF ₆)
Status	Operating	Operating	Operating	Operating
Aggregation Level	Summed	Summed	Summed	Summed
Current Fuels	Wastewater Treated, Other	Other input, Other	Asphalt, Other Crude Oil Other Naphtha, Other	Other input, Other

The California GHG Emissions Reporting Tool - Mozilla Firefox

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https://ghgreporttraining.arb.ca.gov/eats/carb_training/index.cfm?fuseaction=emit_activities.detail_upd&emit_activity_id=1y1OW1Y1

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b.) Supplemental refers to additional emitting activities which you do not want included in your total sum (ex. specific equipment already included in a summed total).
 c.) Optional data refers to all emitting activities for which you are not required to report (ex. Mobile Emissions).
 5.) The fuel list is limited to fuels, feedstocks, and other inputs available for your emitting activity category.

Facility

Facility Name Old Sacramento Oil Refinery
 ARB ID 401014

Edit Emitting Activity

Emitting Activity Name Storage Tanks
 Emitting Activity Category Fugitive
 Activity Type Storage Tanks
 Status Operating
 Aggregation Level Summed

Available Fuels (Fuels, Feedstocks, or Other)

Acid Gas, Other
 Asphalt & Road Oil, Other
 Asphalt Blown, Other
 Central Appalachia (E KY): Surface Mined Coal, Other
 Central Appalachia (E KY): Underground Mined Coal, Other
 Central Appalachia (VA): Surface Mined Coal, Other
 Central Appalachia (VA): Underground Mined Coal, Other
 Central Appalachia (WV): Surface Mined Coal, Other
 Central Appalachia (WV): Underground Mined Coal, Other
 OKD, Other
 Clinker, Other
 Heat from Geothermal Steam / Fluid, Other
 Illinois: Surface Mined Coal, Other
 Illinois: Underground Mined Coal, Other
 Kilometers Traveled, Other
 Miles Traveled, Other
 West Coast Plains: Surface Mined Coal, Other

Current Fuels (Fuels, Feedstocks, or Other)

Asphalt, Other
 Crude Oil, Other
 Naphtha, Other

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Figure 5. Establishing a Fugitive Emitting Activity

Flares and Other Destruction Devices - This Emitting Activity Category is used to set up Emitting Activity pages for emissions from Flares and Other Destruction Devices at your facility. See Table 6 below, where the Emitting Activity categories available for reporting Flares and Destruction Device emissions are listed.

Table 6. Emitting Activities - Flares and Other Destruction Devices

Tool Data Heading	Emitting Activities - Flares and Destruction Devices	
Emitting Activity Name(enter unique emissions identifier)	Flares	Other Destruction Devices
Emitting Activity Category	Flares and Destruction	Flares and Destruction
Activity Type	Flares	Other Control Devices
Status	Operating	Operating
Aggregation Level	Summed	Summed
Current Fuels	Other Fossil Based Wastes, Fuel	Other Fossil Based Wastes, Fuel

Edit Emitting Activity

Emitting Activity Name *

Emitting Activity Category *

Activity Type *

Status *

Aggregation Level *

Available Fuels (Fuels, Feedstocks, or Other)

- Asphalt & Road Oil, Fuel
- Asphalt, Fuel
- Associated Gas, Fuel
- Aviation Gasoline, Fuel
- Biodiesel, Fuel
- Biogas, Fuel
- Biomass Derived Fuels (Solid), Fuel
- CA Low Sulfur Diesel, Fuel
- CA Reformulated gasoline, 5.7% ethanol, Fuel
- Coal (Anthracite), Fuel
- Coal (Bituminous), Fuel
- Coal (Lignite), Fuel
- Coal (Sub-bituminous), Fuel
- Coal (Unspecified (Electric Power)), Fuel
- Coal (Unspecified (Industrial Coking)), Fuel
- Coal (Unspecified (Other Industrial)), Fuel
- Coal (Unspecified (Residential/Commercial)), Fuel

Current Fuels (Fuels, Feedstocks, or Other)

- Other Fossil Based Wastes, Fuel

Figure 6. Establishing a Flare/Other Destruction Device Emitting Activity

Facility Details	Addresses	Geographic Location	Contacts	Associated Entity	Verification Bodies	Emitting Activities
Generating Units	Devices	Energy and Production	Facility Documents	Facility and Unit Submissions	ARB Notifications	
Emitting Activities						
<input type="radio"/> Process Vents	Process	Process Vents	Operating	Summed		
<input type="radio"/> Asphalt Blowing - uncontrolled	Process	Asphalt Production Blowing Stills	Operating	Summed		
<input type="radio"/> Sulfur Recovery Units	Process	Sulfur Recovery Units	Operating	Summed		
<input type="radio"/> Wastewater Treatment	Fugitive	Wastewater Treatment Facilities (General)	Operating	Summed		
<input type="radio"/> Oil/Water Separators	Fugitive	Oil/Water Separators (General)	Operating	Summed		
<input type="radio"/> Storage Tanks	Fugitive	Storage Tanks	Operating	Summed		
<input type="radio"/> Equipment Fugitive Emissions	Fugitive	Equipment Fugitive Emissions (use for SF6)	Operating	Summed		
<input type="radio"/> Flares	Flares and Destruction	Flares	Operating	Summed		
<input type="radio"/> Other Destruction Devices	Flares and Destruction	Other Control Devices	Operating	Summed		
<input type="radio"/> Hydrogen Plant	Stationary Combustion and Process	Hydrogen Plant(s) Combined (Stationary and Process)	Operating	Summed		
<input type="radio"/> Hydrogen Plant - east	Process	Hydrogen Plant(s)	Operating	Summed		
<input type="radio"/> All Refinery Stationary Combustion	Stationary Combustion	Multiple Sources	Operating	Summed		
<input type="button" value="Add Emitting Activity"/> <input type="button" value="Edit Emitting Activity"/> <input type="button" value="Delete Emitting Activity"/>						

Figure 7. Example Facility Information Emitting Activity report structure for a Petroleum Refinery

When you complete the process of setting up Emitting Activities for all emission sources at your refinery, the Facility Information Emitting Activity summary page should look something like that seen above in Figure 7.

Adding Devices - You must also establish a database for your fuel meters so that you may report fuel use at the last point of metering. To do this return to the **Facility Information** page, select the **Devices** tab, and click the **Add Device** tab at the bottom left corner of this page. On the Add Device page enter a **Device Name**, choose **Meter** for the **Device Type**, and enter descriptive information to help identify the specific meter in question (see Figure 8 below). **Save** the data, select the **Add Device** tab and repeat the process until you have added all your facility fuel meters.

ARB staff understands that for many facilities reporting fuel consumption for each meter can be very time-consuming. Optional methods (bulk download and/or spreadsheet submission) for reporting device level fuel consumption data are currently being explored.

The California GHG Emissions Reporting Tool - Mozilla Firefox

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https://ghgreporttraining.arb.ca.gov/eats/carb_training/index.cfm?fuseaction=device.detail_add&returnfuseaction=source.detail_u4

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Facility Annual Reporting

Logged in as Byard Mosher Help

Add Device

Use this page to create a device. Enter the required fields marked by a red asterisk (*) below. Then click the Save button.

Facility

Facility Name Old Sacramento Oil Refinery
ARB ID 401014

Add Device

Device Name * Meter 1065
Device Type * Meter
Description Meter 1065 measures the flow of Refinery Fuel Gas from RFG System #3 to the Vacuum Heater (S#19)

Back Save

Home : Visit ARB Mandatory Reporting Page : Return to Top

Done ghgreporttraining.arb.ca.gov

start Inbox - Microsoft Out... C:\documents\GHG_r... ARB_GHG_RT_Refine... The California GHG E... 1:28 PM

Figure 8. Adding a Device

STEP FIVE

Reporting Emissions and Fuel and Feedstock Consumption

Once you have set up the reporting framework for your facility - establishing Emitting Activities for each emissions source and device level metering - you are ready to start entering emissions data and fuel and feedstock consumption data.

Reporting Emissions - To begin this process, place the cursor over **Annual Reporting** in the blue banner at the top of the page, and click on **Create New Submission** in the pull down menu. You will next see the **Select Submission Details** page (Figure 9). For 2009 the **Report Year** and **Reporting Period** default to 2008 and 01/01/2008 - 12/31/2008 respectively. These fields cannot be changed in the 2009 report year. Choose **Facility** for your **Reporting Level** and **Emissions and Fuels** for the **Submission Type**. You will use the second **Submission Type** option, **Energy and Production** to report purchased Indirect Energy and Hydrogen Production later in the reporting process.

NOTE: Editing Emissions Data - Facility emissions data can be edited at any time prior to locking the data submissions for verification. Click either the **Review Draft Submission** tab or the **View Emissions Data** tab, highlight the fuel which you want to edit and click the **Edit Record** tab. Edit the data as necessary and **Save** to save changes.

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Facility Annual Reporting

Select Submission Details

Select the relevant Reporting Year, Reporting Level, and Submission Type from the drop-down menus for which you would like to report annual data. Then click the **Continue** button. On the next page, you will choose a specific Power Entity, Facility, or Generating Unit for which to report annual data.

Reporting Year ^{*} 2008
Reporting Period 01/01/2008 - 12/31/2008
Reporting Level ^{*} Facility
Submission Type ^{*} Emissions and Fuels

Continue

Home : Visit ARB Mandatory Reporting Page : Return to Top

Figure 9. Selecting Submission Details for Your Facility GHG Report

Choose **Continue** when you have selected the proper inputs. On the **Select Facility** page which loads next, choose the Facility for which you wish to enter data by clicking and highlighting the Facility name, and click **Continue**. The **Review Annual Emissions and Fuels Submission** page will load (see Figure 10 below).

Annual Reporting > The California GHG Emissions Reporting Tool - Mozilla Firefox

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https://ghgreporttraining.arb.ca.gov/eats/carb_training/crave3/index.cfm?fuseaction=submission.detail_upd&submission_id=1328

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Facility Annual Reporting

Review Annual Emissions and Fuels Submission

Use this page to report and review annual emissions and fuels data.

The tabs below allow you to report and review the following data: 1.) Emitting Activity Fuel Data, 2.) Emissions Data, 3.) Device Level Fuel Data, and 4.) Supporting Documentation.

Submission Detail

Submission ID 132

Submission Status Unverified Preliminary Data

Reporting Year 2008

Facility

Facility Name Old Sacramento Oil Refinery

ARB ID 401014

Emitting Activity Fuel Data Detail **Emissions Data Detail** **Device Level Fuel Use Data Detail** **Supporting Documentation**

Emitting Activity Fuel Data Detail

Fuel	Fuel Type	Quantity	Emitting Activity Name	Carbon Content	HHV	CO2 EF	CH4 EF	N2O EF	Custom 1	Custom 2	Custom 3	GHGs Reported

[Report Additional Data](#)

Done ghgreporttraining.arb.ca.gov

start Calendar - Microsoft ... C:\documents\GHG_r... ARB_GHG_RT_Refine... Annual Reporting > T... 2:42 PM

Figure 10. Review Annual Emissions and Fuels Submission

NOTE: Changing data table column widths and display appearance. When you see pages such as the **Review Annual Emissions and Fuels Submission** page (Figure 10) where tables of data are displayed, the column width and order in which the columns are displayed may be changed. To change column width place the cursor over the vertical column in the display bar and the cursor will change to a vertical bar with arrows point right and left. Click and hold the left mouse button and drag the column divider and drop it. To move columns and change the display order, move the cursor over the column text box until the cursor changes from an arrow to a hand, then click and hold down the right mouse button. Drag the text box to the new position until the text box icon changes from ⊗ to a circle with a green check mark, and drop the column in the column lineup where you want it.

Click the option **Report Additional Data** at the bottom left corner of this page. A page entitled **Select Emitting Activity** will appear (Figure 11). Here you will see a Table listing all facility emitting activities that you have created. Note that the emitting activity table may be more than one page in length. You will now enter both emissions and fuel and feedstock consumption data for each of these facility emitting activities.

Select Emitting Activity

Use this page to select an emitting activity for which to report emissions and fuels data. Highlight and click the row in the grid listing the emitting activity for you wish to report data, and then click the **Continue** button.

The grid below contains only emitting activities which have been previously created at the source inventory level. Emitting activities, including fuel type, must be set-up and pre-defined under the main Facility tab, under the Facility Info, Emitting Activities tab (or the main Power Entity Tab, under Power Entity Info, Emitting Activities tab in the case of Power Entity SF6 Emissions).

Submission Detail

Submission ID: 132
 Submission Status: Unverified Preliminary Data
 Reporting Year: 2008

Facility

Facility Name: Old Sacramento Oil Refinery
 ARB ID: 401014

Emitting Activity Name	Emitting Activity Category	Activity Type	Inputs Reported	Emissions Reported	Aggregation Level
Storage Tanks	Fugitive	Storage Tanks	No	No	Summed
Equipment Fugitive Emissions	Fugitive	Equipment Fugitive Err	No	No	Summed
Flares	Flares and Destruction	Flares	No	No	Summed
Other Destruction Devices	Flares and Destruction	Other Control Devices	No	No	Summed
Hydrogen Plant	Stationary Combustion and Process	Hydrogen Plant(s) Coi	No	No	Summed
Hydrogen Plant - east	Process	Hydrogen Plant(s)	No	No	Summed
All Refinery Stationary Combustion	Stationary Combustion	Multiple Sources	Yes	Yes	Summed

Page 2 of 2

Back **Continue**

Home : Visit ARB Mandatory Reporting Page : Return to Top

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ghgreporttraining.arb.ca.gov

Figure 11. Select Emitting Activity

In this illustration we have selected the **All Refinery Stationary Combustion** Emitting Activity field. We will next proceed to enter the amount of each of the fuels or fuel categories combusted at the facility and the associated Stationary Combustion emissions associated with this combustion. Highlight the Emitting Activity Name and click **Continue**.

1. **Select Fuel from the Grid** (see Figure 12 below). Highlight the emitting activity for which you wish to enter data by clicking on the emitting activity line in the Table. Click **Continue**. Next you will see a page entitled **Activity Fuel Use** (Figure 12). On this page you will enter the amount of fuel (and when appropriate, feedstock) associated with this emitting activity that was consumed for the report year at the facility.

Highlight the fuel in the Emitting Activity fuels grid list and the fields below the grid will become active (see Figures 12 and 13). In the example shown below we are entering fuel consumption and emissions data for the first Emitting Activity - Stationary Combustion of Refinery Fuel Gas.

In the field 1. **Select Fuel from the Grid** highlight a fuel (in this case Low Btu gases) in the Fuel Grid (see Figure 12 below).

Annual Reporting > The California GHG Emissions Reporting Tool - Mozilla Firefox

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https://ghgreporttraining.arb.ca.gov/eats/carb_training/crave3/index.cfm?cfdebug

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Activity Fuel Use

Use this page to report fuel use for an emitting activity.

Emitting activities, including fuel type, must be set-up and pre-defined under the main Facility tab, under the Facility Information page, Emitting Activities tab. If you need to add or edit the fuels associated with this emitting activity, please return to the Facility Information page, Emitting Activities tab.

The grid below allows you to select a fuel for which to report. Highlight and click the row in the grid listing the fuel for which you wish to report data.

The block below allows you to report quantity consumed and the appropriate unit of measure.

Refer to the bottom block to report additional detailed factors data: 1.) Annual Average Carbon Content, if measured, 2.) Annual Average Heat Content HHV, if measured, 3.) CO₂ EF, 4.) CH₄ EF, 5.) N₂O EF, and 6.) up to 3 Custom Factors. Click the Default checkbox to populate the field with default factor values.

Submission Detail

Submission ID 132

Submission Status Unverified Preliminary Data

Reporting Year 2008

Emitting Activity

Facility Name Old Sacramento Oil Refinery

ARB ID 401014

Emitting Activity Name All Refinery Stationary Combustion

Aggregation Level Summed

1. Select Fuel from the Grid

Activity Fuel Use Records (Fuels, Feedstocks, Other)

Fuel	Fuel Type	Quantity	Carbon Content	HHV	CO ₂ EF	CH ₄ EF	N ₂ O EF	Custom 1	Custom 2	Custom 3
CA Low Sulfur Diesel										
CA Reformulated gasoline, 5.7%										
Flexigas										
Low Btu Gas										
Associated Gas	Fuel	1111 million scf		455						
Natural Gas (1000 to 1,025 Btu)	Fuel	212 million scf	14.43 kg C / MMERtu	87	52.87 kg CO	0.9 g CH ₄ /	0.1 g N ₂ O /			
Other	Fuel	5555 million scf	5 kg C / MMERtu							
Refinery Gas	Fuel	7468 million scf	17.51 kg C / MMERtu	1100 Btu		0.9 g CH ₄ /	0.1 g N ₂ O /			

Page 1 of 1

2. Enter Fuel Quantity Consumed / Used.

Figure 12. Selecting a fuel from the Emitting Activity grid

Enter the amount of the fuel consumed/used in Section 2 **Quantity Consumed** box (Figure 13) of this page (in the example 2009) and choose the correct Units of Measure (millions scf) from the Units of measure pull-down menu.

Note: In the Emitting Activity cases where there is not a requirement to report fuel or feedstock consumption (e.g. fugitive emissions), there are two approaches to reporting emissions.

1. You may enter 0 (zero) for the **Quantity Consumed**. If you choose this option the final report will list the zero for the Fuel Name.
2. You may also leave the **Quantity Consumed** field blank. In this case the reporting grid will display the emissions you have entered along with an additional field called "**Remainder.**" It is not necessary to enter emissions for the **Remainder** category, but it may be useful for certain fugitive emissions.

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Fuel Type	Quantity Consumed	Unit of Measure	CO ₂ Emissions	CH ₄ Emissions	N ₂ O Emissions
CA Low Sulfur Diesel					
CA Reformulated gasoline, 5.7%					
Flexigas					
Low Btu Gas					
Associated Gas	Fuel	1111 million scf	455		
Natural Gas (1000 to 1,025 Btu)	Fuel	212 million scf	14.43 kg C / MMBtu	87	52.87 kg CO ₂ / 0.9 g CH ₄ / 0.1 g N ₂ O /
Other	Fuel	5555 million scf	5 kg C / MMBtu		
Refinery Gas	Fuel	7468 million scf	17.51 kg C / MMBtu	1100 Btu	0.9 g CH ₄ / 0.1 g N ₂ O /

Page 1 of 1

2. Enter Fuel Quantity Consumed / Used.

Fuel Name *	Quantity Consumed *	Unit of Measure *
Low Btu Gas	2009	million scf

3. Enter Detailed Fuel Factors

Emissions Factors and Other Data for Selected Fuel Type and Activity

Factor Name	Default	All	Value	UOM
Annual Avg Carbon Content if measured:	<input type="checkbox"/>	<input type="checkbox"/>		kg C / MMBtu
Annual Avg Heat Content HHV if measured:	<input type="checkbox"/>	<input type="checkbox"/>		
CO ₂ EF	<input type="checkbox"/>	<input type="checkbox"/>		
CH ₄ EF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.3	g CH ₄ / MMBtu
N ₂ O EF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.1	g N ₂ O / MMBtu
Custom Factor 1	<input type="checkbox"/>	<input type="checkbox"/>		
Custom Factor 2	<input type="checkbox"/>	<input type="checkbox"/>		
Custom Factor 3	<input type="checkbox"/>	<input type="checkbox"/>		

Save and Deposit for Other Fuels

Done

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Figure 13. Enter Fuel Quantity Consumed/Used

Next we must identify and/or enter any Emission Factors used to calculate emissions. Check the Default EF boxes for CH₄ and N₂O.

Click **Save** and the data entry fields appear grayed out. If there are other fuels or feedstocks connected to this Emitting Activity click **Back** and repeat the process for each fuel and feedstock.

Next click **Report Emissions** and the **Report Emissions** (Figure 14) page will load. In section 1 (**1. Select Fuel**) highlight the fuel in the fuel column for which you wish to enter emissions (in this case **Low Btu gases**).

Note the Tabs for CO₂ CH₄ and N₂O found across the top of box entitled:
2. Select Report Emissions and Calculation Method for Each GHG.

The CO₂ (Carbon Dioxide) tab will be active when this page first opens. Check the **Report Emissions** box, select **Best Available - Pre-Calculated** from the **Select Calculation Method** pull-down menu, enter fuel emissions (in this case Refinery Fuel Gas emissions of 508679) and choose the units (in this case the only option is metric tonnes).

Note: An error message will be displayed if you use commas in your numeric entries.

1. Select Fuel

Fuel	Fuel Type	Quantity	Carbon Content	HV	CO2 EF	CH4 EF	N2O EF	Custom 1	Custom 2	Custom 3	GHG
Other	Fuel	5555 million scf	5 kg C / MMBtu								CH4 (Me
Remainder Emission											CO2 (Ca
Associated Gas	Fuel	1111 million scf		455							CH4 (Me
Natural Gas (1000 f	Fuel	212 million scf	14.43 kg C / MMBtu	87	52.87 kg CO	0.9 g CH4 /	0.1 g N2O /				CH4 (Me
Refinery Gas	Fuel	7468 million scf	17.51 kg C / MMBtu	1100 Bt		0.9 g CH4 /	0.1 g N2O /				CH4 (Me
Low Btu Gas	Fuel	2009 million scf				0.3 g CH4 /	0.1 g N2O /				

2. Select Report Emissions and Calculation Method for Each GHG.

☒ Report Emissions

Greenhouse Gas CO2 (Carbon dioxide)

Select Calculation Method Best Available - Pre-Calculated

Precalculated Value 0 metric tons

Comment:

☐ De minimis

3. Review Results

Greenhouse Gas	Select Calculation Method	Precalculated Value
CO2 (Carbon dioxide)	Best Available - Pre-Calculated	0 metric tons

Figure 14. Reporting Emissions

Repeat this process to report CH₄ and N₂O emissions. Click the CH₄ (Methane) and N₂O (Nitrous Oxide), check the **Report Emissions** box, choose **Best Available- Pre Calculated** from the **Select Calculation Method** pull-down menu and enter the **Precalculated Value**.

You may enter comments if you wish, and check the *De minimis* box if you are reporting these emissions as *De minimis*. Click **Save**.

Repeat this process for each of the fuels and feedstocks associated with your Emitting Activities. Use the **Back** tab to navigate back to the **Select Emitting Activity** page (Figure 11), highlight the next Emitting Activity and **Continue**.

STEP SIX

Reporting Device Level Fuel Consumption

Once you have completed data entry for all facility Emitting Activities you must report fuel consumption at the last level of metering. You should have already established your Device (Fuel Meter) database in Step Four. To report device level fuel use, navigate to the **Review Annual Emissions and Fuels Submission** page and select the **Device Level Fuel Use Data Detail** tab (see Figure 15 below).

Annual Reporting > Create New Submission : The California GHG Emissions Reporting Tool - Mozilla Firefox

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https://ghgreporttraining.arb.ca.gov/eats/carb_training/crave3/index.cfm?fuseaction=submission.detail_upd&submission_id=1328m

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Facility Annual Reporting

Review Annual Emissions and Fuels Submission

Use this page to report and review annual emissions and fuels data.

The tabs below allow you to report and review the following data: 1.) Emitting Activity Fuel Data, 2.) Emissions Data, 3.) Device Level Fuel Data, and 4.) Supporting Documentation.

Submission Detail

Submission ID 132

Submission Status Unverified Preliminary Data

Reporting Year 2008

Facility

Facility Name Old Sacramento Oil Refinery

ARB ID 401014

Emitting Activity Fuel Data Detail **Emissions Data Detail** **Device Level Fuel Use Data Detail** **Supporting Documentation**

Device Level Fuel Use Data Detail

Device Name	Device Type	Fuel Name	Quantity	Comment
Report Additional Data				

[Back](#) [Review Submission QA Checks](#)

Home : [Visit ARB Mandatory Reporting Page](#) : [Return to Top](#)

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start | Inboxes - Microsoft Out... | C:\documents\GHG_r... | ARB_GHG_RT_Refine... | Annual Reporting > C... | 2:04 PM

Figure 15. Device Level Fuel Consumption Reporting

Reporting Device Level Fuel Consumption Data (see Figure 16)

1. Click the **Report Additional Data** tab
2. Select a Meter from the **Device Name** pull-down menu
3. Select the type of fuel metered from the **Fuel** pull-down box
4. Enter the quantity of fuel consumed in the **Quantity Measured** box
5. Choose the units of measure from the **Units** pull-down menu

6. Add comments in the Comments box
7. Save and repeat the process to enter fuel data for additional meters.

Annual Reporting > Create New Submission : The California GHG Emissions Reporting Tool - Mozilla Firefox

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https://ghgreporttraining.arb.ca.gov/eats/carb_training/creve3/index.cfm?cfdebug

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The block below allows you to select a device, fuel, report the quantity consumed and the appropriate unit of measure, and enter a comment if applicable.

Submission Detail

Submission ID: 132
 Submission Status: Unverified Preliminary Data
 Reporting Year: 2008

Facility

Facility Name: Old Sacramento Oil Refinery
 ARB ID: 401014

Device Level Fuel Data Detail

Device Name	Device Type	Fuel	Amount	Comment

Page 1 of 1

Report Fuel Use

Device Name: Meter 1065
 Fuel: Refinery Gas, Fuel
 Quantity Measured: 16753
 Units: million scf
 Comment:
 Back Delete Record Save

Done ghgreporttraining.arb.ca.gov

Figure 16. Reporting Device Level Fuel Data

STEP SEVEN

Reporting Indirect Energy Use and Other Data

Petroleum Refineries, Hydrogen Production Plants, and Oil-and-Gas Production Facilities are required to report certain **Energy and Production** data. These facilities must report indirect or purchased energy (thermal and electricity), hydrogen production, hydrogen sold as transportation fuel, and transferred CO₂ and CO where applicable. To begin this process select the Annual Reporting option found in the Blue Bar at the screen top and click on the Create New Submission selection from the pull-down menu. On this page select the appropriate **Reporting Year** (2008), **Reporting Period** (01/01/2008-12/31/2008), **Reporting Level** (Facility), and **Submission Type** (Energy & Production) see Figure 17 below.

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Facility Annual Reporting

Select Submission Details

Select the relevant Reporting Year, Reporting Level, and Submission Type from the drop-down menus for which you would like to report annual data. Then click the **Continue** button. On the next page, you will choose a specific Power Entity, Facility, or Generating Unit for which to report annual data.

Reporting Year * 2008
Reporting Period 01/01/2008 - 12/31/2008
Reporting Level * Facility
Submission Type * Energy and Production

Continue

Home : Visit ARB Mandatory Reporting Page : Return to Top

Figure 17. Energy & Production Reporting

Select **Continue** when you have input the correct information on this page. You will then see the **Annual Energy and Production Submission** page (Figure 18). There are three tabs available - **Indirect Energy Use**, **Hydrogen**, and **Supporting Documentation**. You will use these tabs to enter the required Energy and Production data.

Annual Reporting > The California GHG Emissions Reporting Tool - Mozilla Firefox

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https://ghgreporttraining.arb.ca.gov/earb/carb_training/crave3/index.cfm?fuseaction=submission.detail_upd&submission_id=1568m

Annual Energy and Production Submission

Use this page to report and review annual energy and production data.

The tabs below allow you to report the following data: 1.) Indirect Energy Use Data, 2.) Energy Production Data, 3.) Energy Sold or Provided Data, 4.) Steam Production Data, 5.) Cement Efficiency Metrics Data, 6.) Hydrogen Data, and 7.) Supporting Documentation.

You may add or remove reporting categories on the Facility Information page, Energy and Production tab. The reporting categories selected on the Facility Information page, Energy and Production tab, will dictate which tabs display below on your Energy and Production submission.

Submission Detail

Submission ID 156
Submission Status Unverified Preliminary Data
Reporting Year 2008

Facility

Facility Name Old Sacramento Oil Refinery
ARB ID 401014

Indirect Energy Use **Hydrogen** Supporting Documentation

Indirect Energy Use

Category	Energy Type	Quantity	Provider	Provider ARB ID
----------	-------------	----------	----------	-----------------

Add

Back **Review Submission QA Checks**

Home : Visit ARB Mandatory Reporting Page : Return to Top

Done ghgreporttraining.arb.ca.gov

start C:\documents\GHG_r... ARB_GHG_RT_Refine... Annual Reporting > T... 4:20 PM

Figure 18. Annual Energy and Production Submission

Reporting Indirect Energy - select the **Indirect Energy Use** tab (the background will appear white when this option is selected). Select the **Add** option tab in the lower left corner. The **Report Data** page (Figure 19) will load.

Report Data

Use this page to report indirect energy use data.

Select the energy type for which you would like to report. Enter the quantity measured.

Use the Select Facility or Select Entity button in the block to navigate off the page and select an energy provider from the system. If the provider is not found using the Select Facility or Select Entity buttons, enter the provider name in the Common Provider Name field, and enter the Facility EIA Identifier.

When complete, click the **Save** button.

Submission Detail

Submission ID: 156
 Submission Status: Unverified Preliminary Data
 Reporting Year: 2008

Facility

Facility Name: Old Sacramento Oil Refinery
 ARB ID: 401014

1. Select Category

Energy Category: Indirect

2. Report Data

Energy Type: Electricity
 Quantity Measured: 0 kWh
 Select Provider: Select Facility or Select Entity
 Provider ARB ID:
 Provider Name:
 If you are unable to locate your provider in the system, please enter their name and appropriate EIA identifier in the fields below.
 Common Provider Name:
 Facility EIA Identifier:
 Back Save

Figure 19. Report Data (Indirect Thermal and Electrical)

Enter the required data on this page.

1. Select Category

Energy Category - Indirect (this is the only selection available)

2. Report Data - report both indirect electricity and thermal energy

Energy Type

Electricity

Quantity Measured - enter kWh of indirect electricity

Units - kWh (only option)

Select Provider - Select Facility or Select Entity and choose supplier from list

Thermal

Quantity Measured - enter Btu of indirect thermal

Units - Btu (only option)

Select Provider - Select Facility or Select Entity and choose supplier from list

If you cannot find your electrical or thermal supplier in either of the lists provided by the tool, enter your **Common Provider Name** and **Facility EIA Identifier** in the fields provided at the bottom of this page. **SAVE** all entered data.

Reporting Hydrogen Production and Transferred CO₂ and CO data

If your facility produced hydrogen you must report additional data. Go back to the **Annual Energy and Production Submission** page (Figure 18) and choose the **Hydrogen** tab - you will see the following page:

Annual Reporting > The California GHG Emissions Reporting Tool - Mozilla Firefox

File Edit View History Bookmarks Tools Help

https://ghgreporttraining.arb.ca.gov/eats/carb_training/crave3/index.cfm?fuseaction=home.cancel&hc=12&nc=72045387C423278E

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Annual Energy and Production Submission

Use this page to report and review annual energy and production data.

The tabs below allow you to report the following data: 1.) Indirect Energy Use Data, 2.) Energy Production Data, 3.) Energy Sold or Provided Data, 4.) Steam Production Data, 5.) Cement Efficiency Metrics Data, 6.) Hydrogen Data, and 7.) Supporting Documentation.

You may add or remove reporting categories on the Facility Information page, Energy and Production tab. The reporting categories selected on the Facility Information page, Energy and Production tab, will dictate which tabs display below on your Energy and Production submission.

Submission Detail		Facility	
Submission ID	156	Facility Name	Old Sacramento Oil Refinery
Submission Status	Unverified Preliminary Data	ARB ID	401014
Reporting Year	2008		

Indirect Energy Use **Hydrogen** **Supporting Documentation**

Hydrogen

Total Hydrogen Produced *	<input type="text" value="0"/>	standard cubic feet
Total Hydrogen Sold for Use as Transportation Fuel *	<input type="text" value="0"/>	standard cubic feet
Total CO ₂ Sold *	<input type="text" value="0"/>	metric tons
Total CO Sold *	<input type="text" value="0"/>	metric tons

Save

[Back](#) [Review Submission QA Checks](#)

Home : [Visit ARB Mandatory Reporting Page](#) : [Return to Top](#)

Done ghgreporttraining.arb.ca.gov

start C:\documents\GHG_r... ARB_GHG_RT_Refine... Annual Reporting > T... 4:58 PM

Figure 20. Reporting Annual Hydrogen Production and Transferred CO₂ and CO

Enter data for the four data fields as appropriate. The units of measure cannot be changed. Insure that the data you enter is in the correct units.

The **Supporting Documentation** tab may be used to upload clarifying and/or supporting documents. Select this tab and then select the **Add** tab to add documents.

<p style="text-align: center;">STEP EIGHT Quality Assurance Checks and Preparing for Certification</p>
--

Prior to locking down your facility emissions data report and beginning the Certification process you should carefully examine the data contained in the report. An Internal Reports option will be available soon.

Reporters should also examine any error messages generated by the tool diagnostic function. There are two separate steps for certification,

- 1) Certifying Fuels and Emissions data, and
- 2) Certifying Energy and Production data

To prompt the reporting tool to run a QA check:

1. Login to the reporting tool website.
2. Select **Report Annual Data**. Set the Reporting Level to **Facility**, And Submission Type to **Emissions and Fuels**, and click **Continue**. Repeat this process for your **Energy and Production** submission.
3. On the Select Facility page, highlight the facility for which you wish to run a QA check and click **Continue**.
4. On the Review Annual Emissions and Fuels Submission page choose the **Review Submission QA Checks** option at the bottom of the page.
5. The **Review Submission QA Checks** page lists all warnings or errors associated with your fuels and emissions data submittal. You will see four grids where error messages will be displayed:

QA: Emitting Activity Fuel Data
QA: Emissions Data
QA: Device Level Fuel Use
QA: Source Inventory Data
6. You should review carefully to see if the tool has identified any errors you made in your data entries. 'Warning' errors do not prevent you from certifying your emissions report, but you should be able to explain them. 'Critical' errors prevent certification and must be resolved.
7. If you have no 'Critical' errors, you can click **Ready for Certification** at the bottom of the page. This indicates to the facility manager that the data are complete for emissions and fuels. Repeat the process for **Energy and Production** after selecting that row.

8. Once you click **Ready for Certification**, the Annual Reporting page will load. The facility manager will select the **Emissions and Fuels** and **Energy and Production** rows in turn by clicking on each, review the QA checks again, and complete the certification process. (Make sure you certify both sets of data. See Section 9.0 of the Users Guide for more details about QA checks and certification.